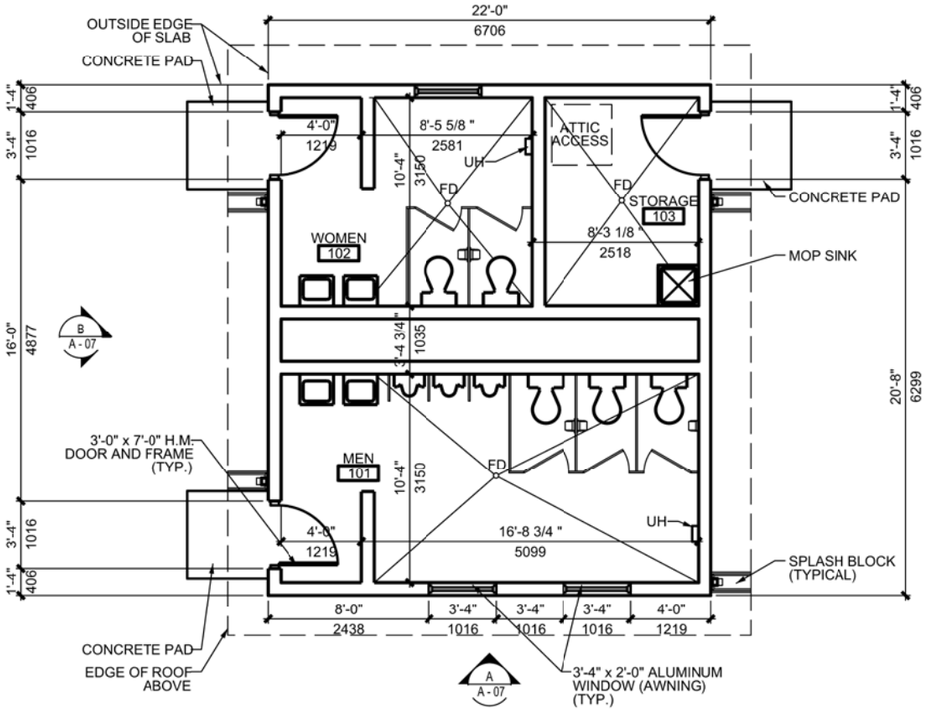
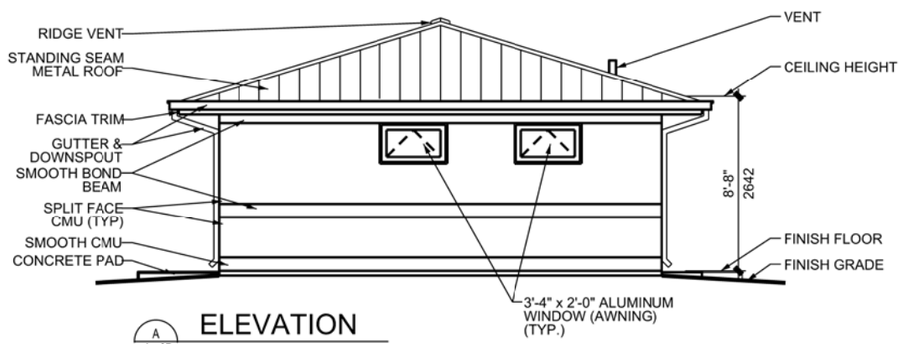


FLOOR PLAN

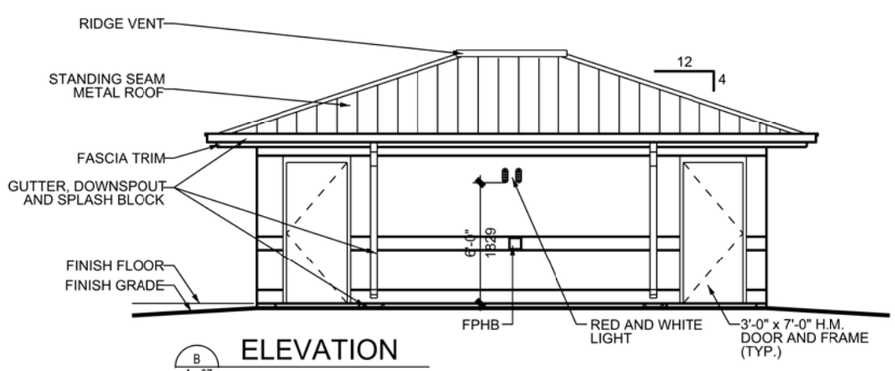
SCALE: 1/4" = 1'-0"



A
A - 07

ELEVATION

SCALE: 1/4" = 1'-0"



B
A - 07

ELEVATION

SCALE: 1/4" = 1'-0"

General

The Latrine - Water Closets provides restroom facilities for men and women. The latrine will accommodate a training unit of up to 150 men and 35 women based on OSHA standards. The facility has an area of 455 square feet (42.27 square meters).

Site Adaptation

This standard definitive design should be adapted to local conditions such as climate, available construction materials and techniques, topography, seismic zone, and the existing character of surrounding buildings. These factors may affect plans, elevations, and building systems. The building foundation must be designed based on the results of a geotechnical investigation.

Reference Criteria

The design and construction must comply with applicable codes and standards including: technical instruction TI800-01, "Design Criteria" Department of the Army regulations, technical manuals, handbooks, standards, specifications, and local/state/federal regulations.

Functional Requirements

All dimensions not labeled are in feet and inches. A mop sink and shelves are provided in the storage room. Windows are bottom hung in-swing to meet functional requirements, providing natural lighting and ventilation. Windows have forced entry resistant metal frames and are provided with insect screens. Provide polycarbonate security glazing in windows. Gutters, downspouts and splash blocks should be provided where required by climatic conditions. Covered entries and ice guards may be necessary in northern climates. Floors should be sealed for ease of cleaning. Ceilings should be finished.
The latrine is accessed only by able-bodied personnel and does not require ADA compliance for the handicapped unless dictated by local criteria.

Mechanical

The mechanical equipment shall be sized in accordance with site requirements, local weather design criteria and the material of building construction. Provide sufficient exhaust fans and louvers for fresh air requirements. Switch the exhaust fans to come on/off when the lights are turned on/off. Route water supply piping under the slab and ensure all pipe work is pressure tested prior to the slab being poured. The latrine is heated for freeze protection.

Electrical

The Latrine shall be served by 120/240V, 1 phase, 3-wire secondary power. Provide Surge Protective Device (SPD) for incoming service. Rigid Steel conduit shall extend a minimum of 5' (1524mm) outside the building for power and communication circuits entering and leaving the building. Voltage drop shall comply with NFPA 70 and Army technical manuals. Grounding will be installed in accordance with NFPA 70 and other applicable standards.
The panelboard shall be 120/240V single phase, mounted inside the building and shall be recessed mounted in finished areas. Receptacles shall be general purpose, GFCI, 120V, 20A Duplex mounted 18"(450mm) above the finish floor. All outlets receptacles and conduit shall be recess mounted. Provide 120/240V power the HVAC unit.
Illumination levels will be designed in accordance with IES. Exterior lighting shall be provided with separate switching located near points of egress. Provide additional fixtures with red lamps next to all exterior fixtures and in all rooms with doors or windows that open to the training area for ranges where training will occur at night. Red lights shall be switched separate from white lights and there shall be provisions to prevent accidental illumination of white lights while red lights are in use.
The emergency electrical system shall comply with NFPA 70 and NFPA 101. Exit signs will be provided in accordance with NFPA 101. Emergency lighting shall be provided to ensure adequate illuminations to egress building in the event of a power outage.

Perform lightning protection risk assessment in accordance with NFPA 780 to determine the need for lightning protection.

Telephone

Telephone service is not required for this building.

Fire Protection

Fire protection is not required per fire codes for this building. The fire alarm shall be a local audible alarm. Fire extinguisher's and cabinets are required per NFPA. Consult local Fire Marshall for compliance with local requirements. Provide a Mass Notification system per UFC.

Abbreviations

CMU concrete masonry unit
EF exhaust fan
FD floor drain
FPHD freeze proof hose bib
LVR - louver
UH unit heater

4' 2' 0 4' 8' 12'
GRAPHIC SCALE: ¼"=1'-0"

US Army Corps of Engineers

Rev.	Description	Date	Approved

Designed by: | Date: | Rev.
Dwn by: | Ckd by: | Design file no.
Reviewed by: | Drawing code:
Submitted by: | File name / Plot scale / Plot scale:

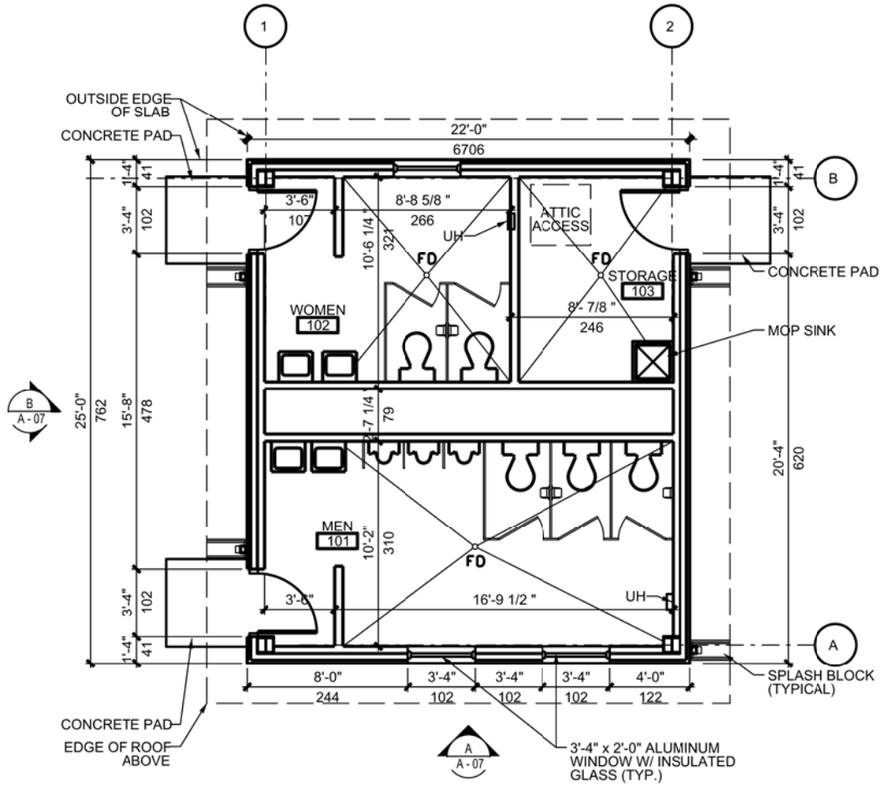
U. S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
HUNTSVILLE, ALABAMA

MARCH 2011

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

LATRINE
WATER CLOSETS

Sheet reference number:
A–07



FLOOR PLAN

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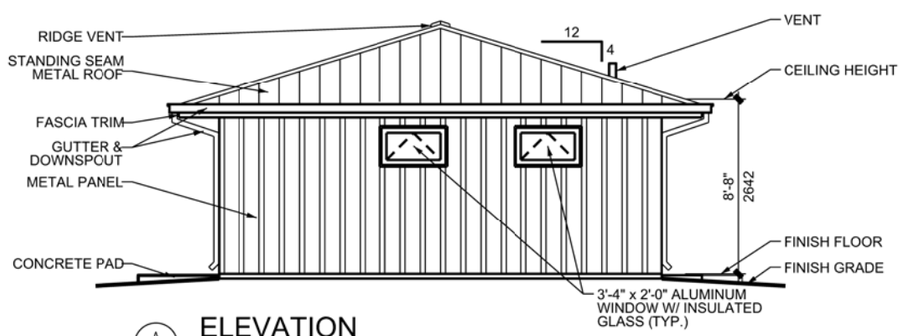

A
A - 07

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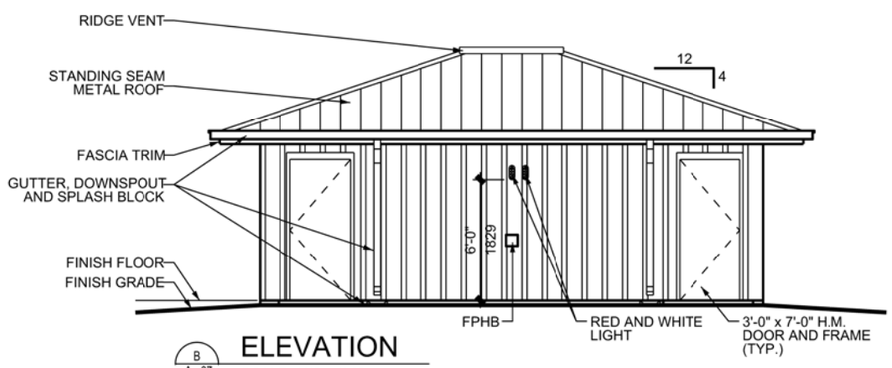

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Perform lightning protection risk assessment in accordance with NFPA 780 to determine the need for lightning protection.

Telephone

Telephone service is not a requirement for range operations. However should be provided to the Ops/Stg Building if it is available in the area.

Fire Protection

Fire protection is not required per fire codes for this building. The fire alarm shall be a local audible alarm. Fire extinguisher's and cabinets are required per NFPA. Consult local Fire Marshall for compliance with local requirements. Provide a Mass Notification system per UFC.

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FD floor drain
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US Army Corps of Engineers

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U. S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
HUNTSVILLE, ALABAMA

MARCH 2011

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

LATRINE
WITH WATER CLOSETS

Sheet reference number:
A–07